2245

MT-730

SERVICE MANUAL

FISHER®

MT-730

Stereo Turntable

134 080 20
(Lid Supplied, Black)
134 080 21
(Without Lid, Black)
134 080 22
(Lid Supplied, Silver)

U.S.

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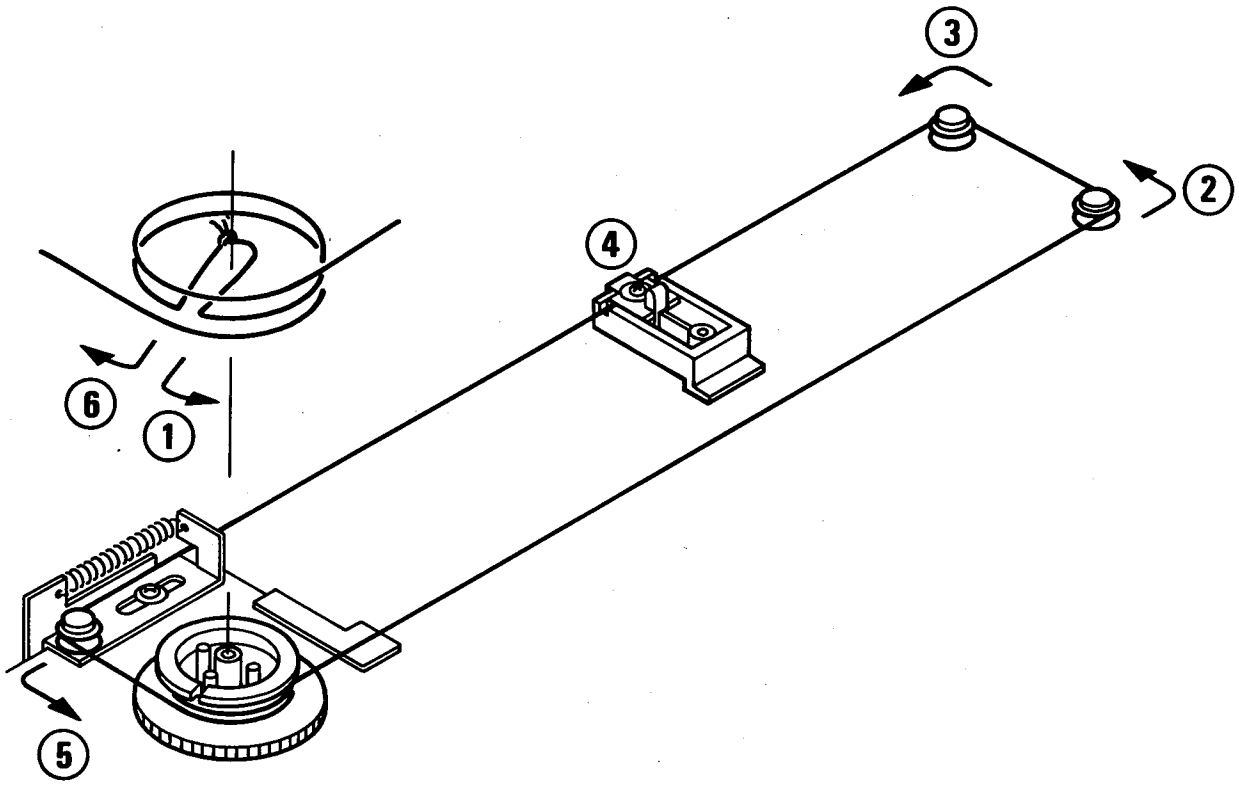
ARM FEED CORD STRINGING

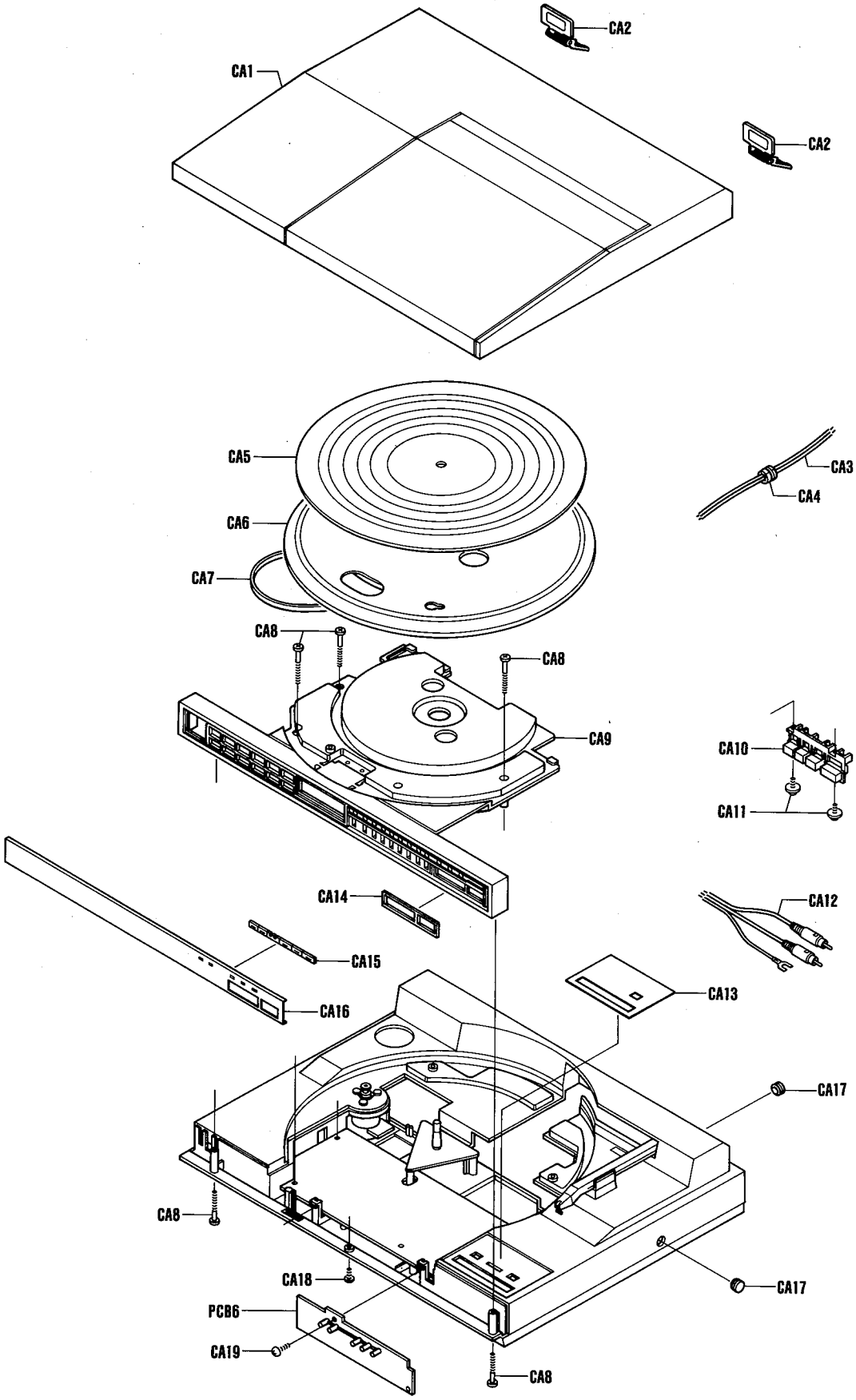


SPECIFICATIONS

TURNTABLE		MT-730
Motor		FG Servo
Drive System		Belt
Wow and Flutter (WRMS)		0.035 %
Rumble (DIN 45539B)		−70 dB
Speed Variation		±1.5 %
Tracking Force		2 g
Platter Diameter		310 mm
Platter Weight		0.6 kg
Record Speed Selector		33-1/3 rpm/ 45 rpm
Automatic Functions		
	Start	Yes
	Repeat	Yes
	Reject	Yes
Automatic Tonearm Return at End of Record		Yes
Manual Function		
	Start	Yes
	Stop	Yes
Tonearm Data		
	Resonance	<18 Hz
	Effective Length	130 mm
	Shape	Straight
Bearing Type		
	Horizontal Friction Sensitivity	Pivot 0.15 g
	Vertical Friction Sensitivity	Pivot 0.2 g
Max. Tracking Error		±0.2°
GENERAL Power Requirements		120 V AC ±10 % 50/60 Hz
Power Consumption		10 Watts
Dimensions (W x H x D)		17.33" x 4.5" x 14.5"
Weight (approx.)		10.5 lbs.

Because its products are subject to continuous improvement, Fisher Corporation reserves the right to modify product designs and specifications without notice and without incurring any obligation.

CABINET & CHASSIS EXPLODED VIEW



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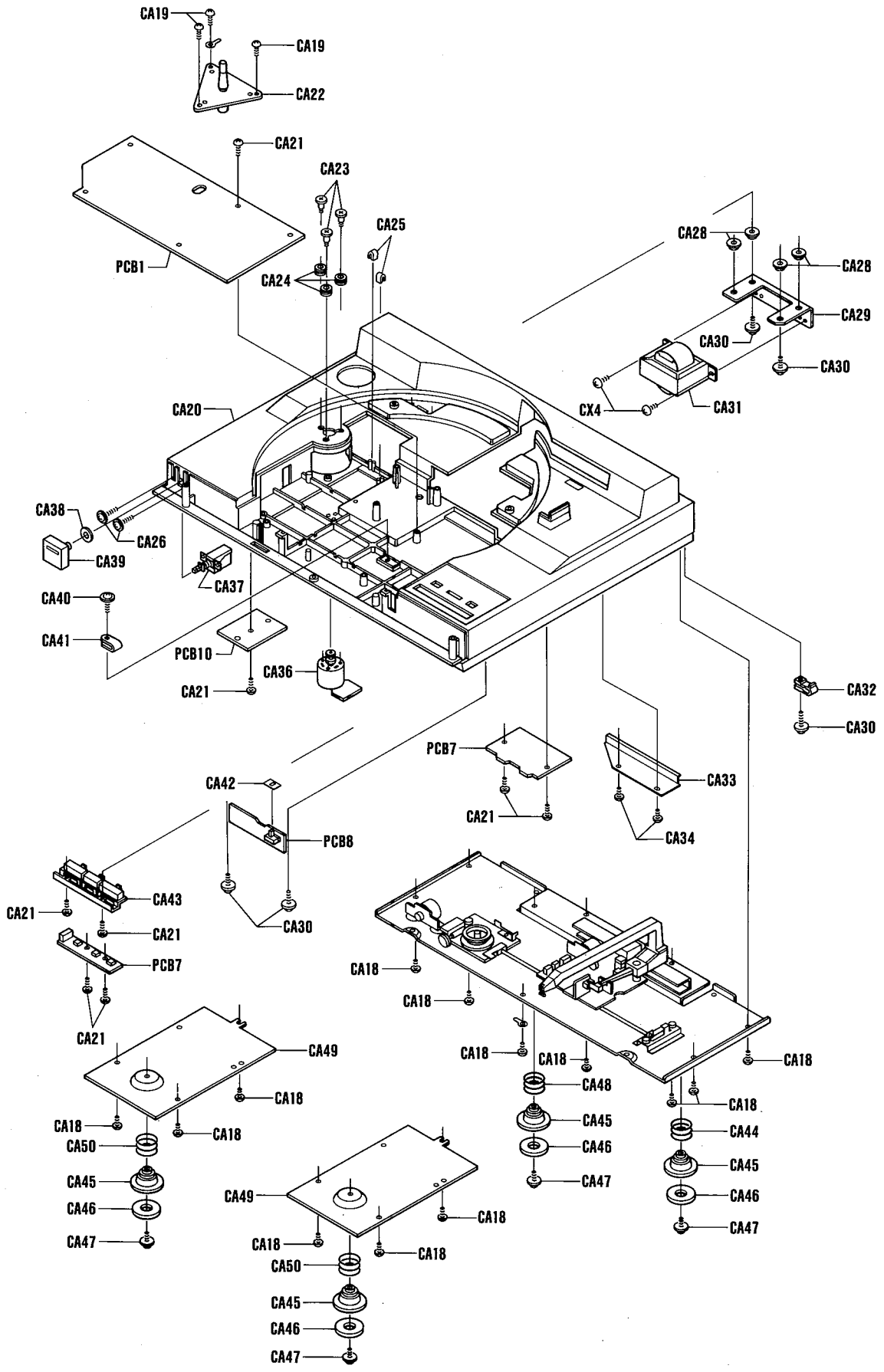
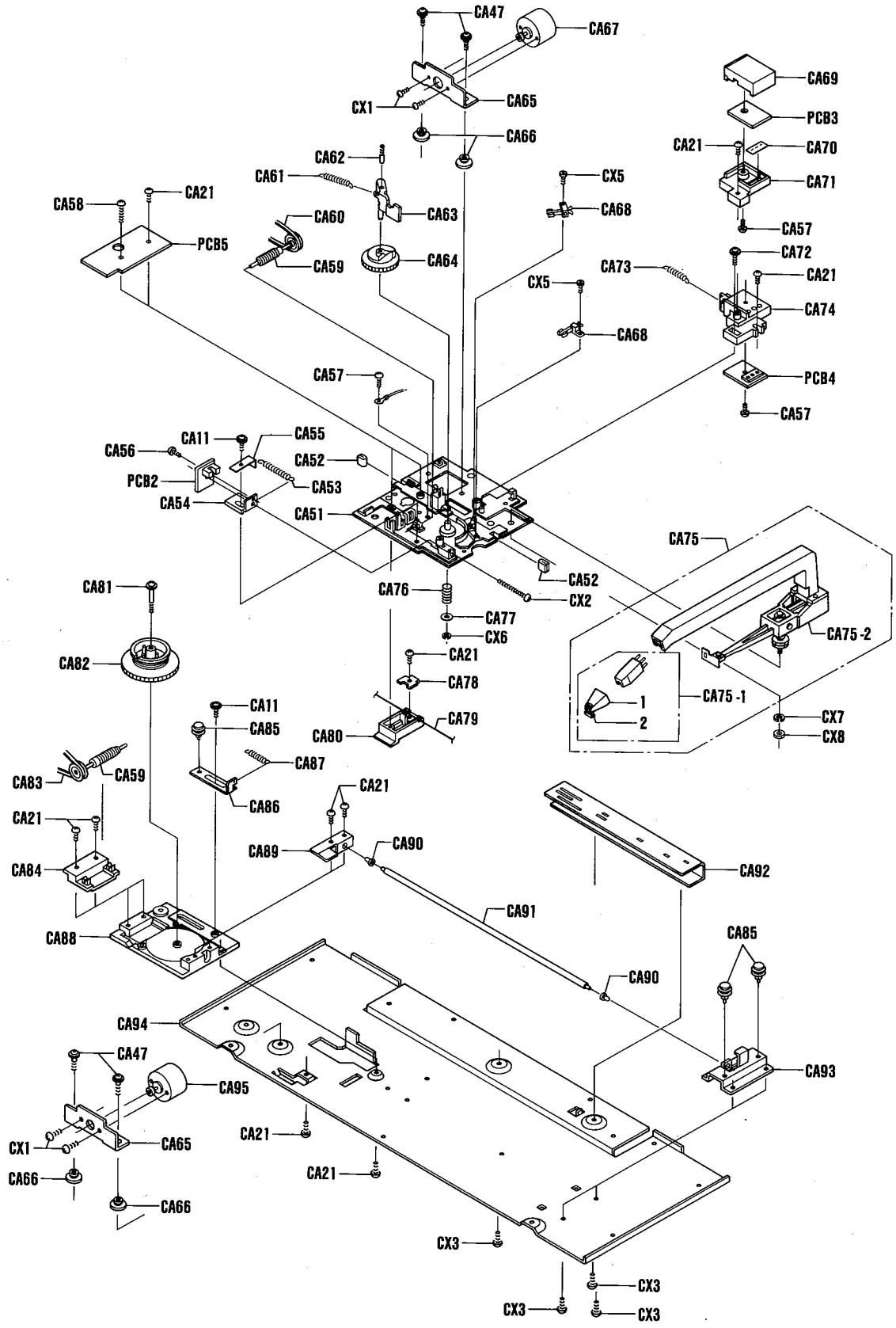


CABINET & CHASSIS EXPLODED VIEW (Continued)



CABINET & CHASSIS PARTS LIST

Ref. No.	Part No.	Description	Q'ty
	PACKAGE		
	131 6 2519 00201	Bag Polyethylene Ind	1
	131 6 3069 17050	Patching Sheet	1
	131 6 4159 10106	Notes	1
	134 2 2104 12300	Screw Transit(+,-)	3
	134 2 4208 15100	Spacer	3
	141 2 4219 32700	Screw Transit	1
	141 6 1139 98300	Box Corrugate-exp (lid supplied, Black)	1
	141 6 1139 98301	Box Corrugate-exp (without lid, Black)	1
	141 6 1139 98304	Box Corrugate-exp (lid Supplied, Silver)	1
	141 6 2519 19490	Bag Polyethylene-exp	1
	141 6 3119 23401	Pad	1
	141 6 3119 24900	Pad Front	1
	141 6 3119 25000	Pad Rear	1
	141 6 3119 25100	Pad (lid supplied, Black/Silver)	1
	141 6 3119 25200	Pad PU (without lid, Black)	1
	141 6 4559 03300	Serial No. Sheet	2
	ACCESSORIES		
	131 6 2719 10801	Bag Fan	1
	131 6 4159 34100	Notes	1
	131 6 4319 10802	Service Station List	1
	131 6 4519 14400	Warranty Card	1
	131 6 4939 00200	Customer Card	1
	134 2 2901 11601	Adapter EP	1
	142 6 4119 32082	Explanatory Booklet	1
	CABINET		
	4 2359 75220	Connector 12P Assy [CN1]	1
	4 2359 76794	Connector 3P Assy [CN9]	1
	4 2359 77145	Connector 1P Assy (Terminal PCB)	1
	4 2359 77345	Connector 4P Assy [CN2]	1
	4 2359 77572	Connector 1P Assy (Control PCB)	1
	131 2 1310 34625	Name Plate	1
	131 2 7103 48800	Label	1
	131 2 7103 26100	Label	1
	131 2 3608 14100	Cramp Wire	6
	134 6 4739 13403	Stylus Label	1
	141 6 4559 03300	Serial No. Sheet	1
CA1	141 0 1249 30600	Lid Assy (lid supplied, Black)	1
CA1	141 0 1249 30601	Lid Assy (lid supplied, Silver)	1
CA2	131 0 2002 16800	Hinge Assy (lid supplied, Black)	2
CA2	131 0 2002 16803	Hinge Assy (lid supplied, Silver)	2
CA3	⚠ 4 2432 00040	Power Cord	1
CA4	131 2 6111 21300	Bushing	1
CA5	134 2 6102 15701	Mat Turntable	1
CA6	141 2 5229 00402	Turntable	1
CA7	134 2 6302 11500	Belt	1
CA8	131 2 4201 20702	Screw, +M3.0x35	5
CA9	141 2 1219 29500	Panel Front (Black)	1
CA9	141 2 1219 29501	Panel Front (Silver)	1
CA10	141 2 1659 35800	Knob	1
CA11	131 2 4201 21100	Screw	4
CA12	131 0 4004 14403	Wire Shield Assy	1
CA13	141 2 1439 14000	Panel Control (Black)	1
CA13	141 2 1439 14001	Panel Control (Silver)	1
CA14	131 2 6113 51000	Shelter	1
CA15	141 2 1329 14400	Filter	1
CA16	141 2 1439 14101	Panel Control	1
CA17	131 2 2904 11000	Pad Lid (Black)	2
CA17	131 2 2904 11001	Pad Lid (Silver)	2
CA18	131 2 4201 20705	Screw, Bdg Hd. Tapping	14

Ref. No.	Part No.	Description	Q'ty
CA19	131 2 4201 23703	Screw	4
CA20	141 2 1129 08800	Cabinet (Black)	1
CA20	141 2 1129 08802	Cabinet (Silver)	1
CA21	131 2 4201 19501	Screw, Button Hd. Tapping	17
CA22	141 0 7519 03900	Shaft Turntabl Compl.	1
CA23	134 2 4201 13600	Screw	3
CA24	134 2 5202 11800	Rubber Cushion	3
CA25	134 2 5205 12000	Cushion	2
CA26	131 2 4201 20300	Screw TP	2
CA28	141 2 4459 31800	Cushion	4
CA29	141 2 3719 06200	Metal Mount Trans	1
CA30	131 2 4201 25205	Screw	6
CA31	⚠ 4 2512 30500	Power Trans [T1]	1
CA32	131 2 3608 12405	Cramp Wire	1
CA33	141 2 1149 39400	Cover	1
CA34	131 2 4201 20801	Screw, +M2.6x8	2
CA36	134 0 5011 02803	Motor Assy [M1]	1
CA37	⚠ 4 2312 06051	Switch Push Power [S4]	1
CA38	131 2 4203 84507	Washer Plain, M4.5x10x0.5	1
CA39	131 2 1601 85202	Knob Power (Black)	1
CA39	131 2 1601 85200	Knob Power (Silver)	1
CA40	131 2 4201 25203	Screw, Brazier Hd. Tapping, +M3.0x16	1
CA41	131 2 3608 11000	Cramp Wire	1
CA42	141 2 4419 21100	Cloth	1
CA43	141 2 1659 35700	Knob	1
CA44	141 2 8559 06501	Spring Mounting	1
CA45	141 2 4459 31700	Cushion(Leg)	4
CA46	131 2 5203 23603	Felt	4
CA47	134 2 4201 13400	Screw	8
CA48	141 2 8559 06506	Spring Mounting	1
CA49	141 2 1259 07300	Plate Bottom	2
CA50	141 2 8559 06505	Spring Mounting	2
CA51	141 0 3129 01900	Unit Plate Assy	1
CA52	141 2 4459 33800	Cushion	2
CA53	141 2 8519 31900	Spring, Slide Base	1
CA54	141 2 3519 67400	Angle Mount(Photo C)	1
CA55	141 2 8539 53800	Spring Plate	1
CA56	131 2 4201 20800	Screw, +M2.6x6	1
CA57	131 2 4201 19500	Screw, Button Hd. Tapping	3
CA58	131 2 4201 19504	Screw, Button Hd. Tapping	1
CA59	141 0 5519 10300	Worm Assy	2
CA60	141 2 5649 22600	Belt	1
CA61	141 2 8519 60000	Spring Plate	1
CA62	134 2 4201 12800	Screw	1
CA63	141 2 7519 64000	Spindle Lifting	1
CA64	141 2 5519 52100	Worm Wheel(A)	1
CA65	141 2 3519 67100	Angle Mount(Motor)	2
CA66	141 2 4459 31800	Cushion	4
CA67	4 5272 00181	Comutate MTR Magnet (Arm) [M3]	1
CA68	4 2319 76680	Leaf Switch (Lift Down) [S2]	1
CA68	4 2319 76680	Leaf Switch (Lift Up) [S3]	1
CA69	141 2 3519 66900	Cover(Holder)	1
CA70	141 2 3519 67500	Plate(Filter)	1
CA71	141 2 3519 66800	LED Holder	1
CA72	141 2 4219 06300	Screw	1
CA73	134 2 5101 32400	Spring	1
CA74	141 2 3519 67000	LED Holder Base	1
CA75	141 0 6419 01000	Pick-up Assy (Black)	1
CA75	141 0 6419 01001	Pick-up Assy (Silver)	1
CA75-1	4 1579 27031	Cartridge(MG-37L)	1
1	4 1579 29451	Stylus(ST-37LD)	1
2	134 2 1402 12700	Retainer Needle	1
CA75-2	141 0 6419 01100	Tone Arm Assy (Black)	1
CA75-2	141 0 6419 01101	Tone Arm Assy (Silver)	1

CABINET & CHASSIS PARTS LIST (Continued)

Ref. No.	Part No.	Description	Q'ty
CA76	134 2 5101 26500	Spring	1
CA77	141 2 4579 05000	Washer, M3.2x10x0.2	1
CA78	141 2 3519 70300	Angle Mount	1
CA79	131 2 4112 10200	Rope	
CA80	141 2 7319 58000	Holder Slide	1
CA81	134 2 4106 27000	Shaft	1
CA82	141 2 5519 52200	Worm Whell(B)	1
CA83	141 2 5649 24700	Belt	1
CA84	141 2 5739 07000	Support Shaft	1
CA85	131 0 3020 11800	Pully Assy	3
CA86	141 2 3519 69000	Angle Mount	1
CA87	141 2 8519 33300	Spring Lock Caset Case	1
CA88	141 2 3169 23200	Frame	1
CA89	141 2 3519 69100	Angle Mount	1
CA90	141 2 4459 33200	Cushion	2
CA91	141 2 5289 01600	Rail	1
CA92	141 2 3169 22201	Guide Angle	1
CA93	141 2 3519 72200	Angle Mount	1
CA94	141 2 1259 07400	Plate Bottom	1
CA95	4 5272 00180	Comutate MTR Magnet (Lifter) [M2]	1
CX1	101 3 1302 00311	Screw, Pan Hd., +M2.0x3	4
CX2	101 3 1303 03011	Screw, Pan Hd., +M3.0x30	1
CX3	103 3 1303 00511	Screw, Pan Hd. Tapping-2, +M3.0x5	4
CX4	103 3 1904 00611	Screw, Brazier Hd. Tapping-2, +M4.0x6	2
CX5	143 3 1702 00818	Screw, Bind Hd. Tapping-B, +M2.0x8	2
CX6	112 3 1302 00011	E Ring, M2.0	1
CX7	110 3 2104 00011	Spring Washer-2, M4.0	1
CX8	106 3 1204 00311	Hex. Nut-2, M4.0	1
PCB1	141 0 1939 05390	Control P.C.B. Assy	1
PCB2	141 0 1939 02710	PCR P.C.B. Assy	1
PCB3	141 0 1939 02721	PTR P.C.B. Assy	1
PCB4	141 0 1939 02731	LED P.C.B. Assy	1
PCB5	141 0 1939 05470	Terminal P.C.B. Assy	1
PCB6	141 0 1939 05400	Switch LED P.C.B. Assy	1
PCB7	141 0 1939 05410	Switch P.C.B. Assy	1
PCB8	141 0 1939 05420	Speed Switch P.C.B. Assy	1
PCB9	141 0 1939 05430	Volume P.C.B. Assy	1
PCB10	141 0 1939 05450	Fuse P.C.B. Assy	1

NOTES:

1. Parts order must contain Model Number, Part Number and Description.
2. Ordering quantity of screws and resistors must be multiple of 10 pcs.

PRODUCT SAFETY NOTICE

Each precaution in this manual should be followed during servicing. Components identified with the IEC symbol ⚠ in the parts list and the schematic diagram designate components in which safety can be of special significance. When replacing a component identified with ⚠, use only the replacement parts designated, or parts with the same ratings of resistance, wattage or voltage that are designated in the parts list in this manual. Leakage-current or resistance measurements must be made to determine that exposed parts are acceptably insulated from the supply circuit before returning the product to the customer.

TURNTABLE ADJUSTMENTS

Stylus Pressure Adjustment

1. Place the unit on a horizontal plane and remove the lid.
2. Turn on the Power switch of the unit.
3. Press ◁ button on the control panel to shift the tonearm to the place as indicated in Fig. 1.
4. Turn the stylus pressure adjustment screw as shown in Fig. 2 through the stylus pressure adjustment hole, so that the stylus pressure meter indicates 1.8 ~ 2.2 g.

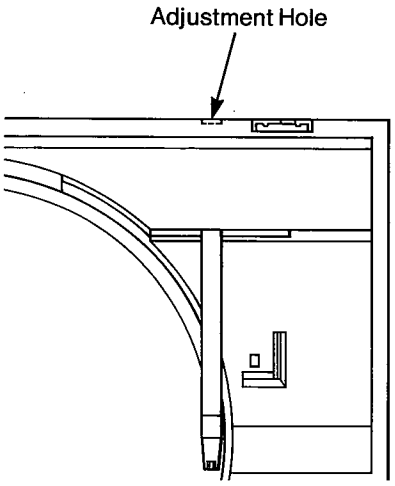


Fig. 1

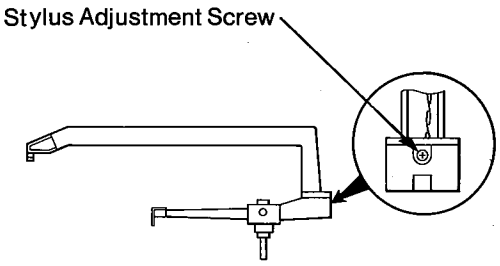


Fig. 2

Tonearm Position Adjustment

1. Turn on the power switch of the unit.
2. Remove the lid and the turntable.
3. Press ◁ button on the control panel to shift the arm to the place where the tonearm position adjustment cam can be observed. (Fig. 3)
4. Adjust the cam, so that the tonearm becomes perpendicular to the rear wall of the cabinet. (Fig. 3)

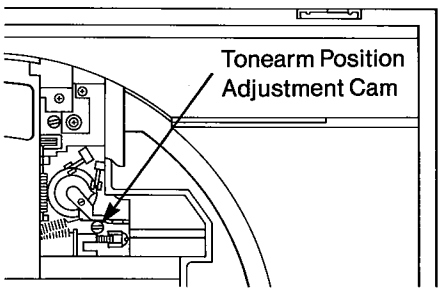


Fig. 3

Stylus Height Adjustment

1. Turn on the power switch of the unit.
2. Remove the lid and the turntable.
3. Press ◁ button on the control panel to shift the arm to the place where the stylus height adjustment screw can be observed. (Fig. 4)
4. Adjust the stylus height to 6mm±0.5mm above the turntable.

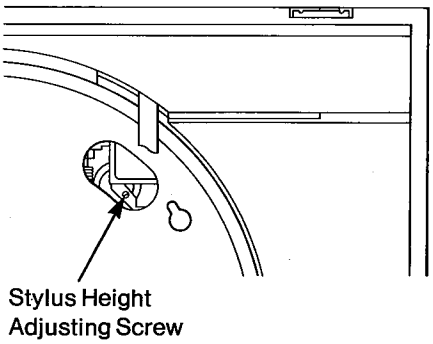


Fig.4

Rotation Adjustment

1. Turn on the power switch of the unit.
2. Use the stroboscope sheet and adjust each volume to obtain proper rotations per minute. (Fig. 5)
   Note: In the first instance, perform the adjustment for 33-1/3 r.p.m.

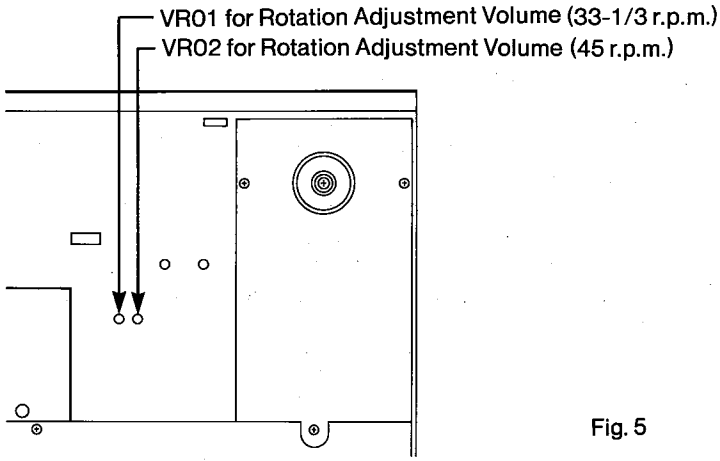


Fig. 5

Arm Trace Adjustment

1. Turn on the power switch of the unit.
2. Place a record on the turntable and trace the silent groove on the last portion of the record.
3. If the groove is not traced correctly, cut off R31 (3.3kΩ) on the Control P.C.Board and re-check the tracing. (Fig. 6)

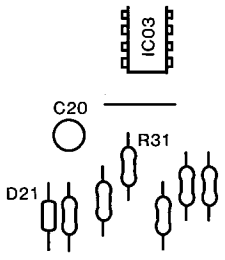


Fig. 6

TURNTABLE ADJUSTMENTS (Continued)

Photointerrupter Position Adjustment for Arm Feed

1. Turn on the power switch of the unit.
2. Place a record with less eccentricity on the turntable and play it.
3. After the record has rotated three or four times, raise the arm by pressing the CUEING button.
4. Turn the arm feed adjustment screw with a screwdriver through the hole on the right side of the cabinet, so that the arm rises straight up. (Fig. 7)

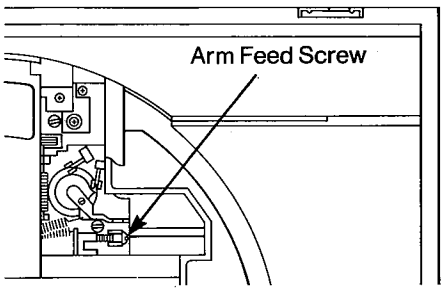


Fig. 7

Lead-in Position Adjustment

1. Turn on the power switch of the unit.
2. Place a record on the turntable and perform the lead-in operation.
3. Adjust the lead-in position adjustment cam, so that the record is led into the correct position.
   Note: If the cam is turned clockwise, the tonearm moves inward. It moves outward if the cam is turned counter-clockwise. (Fig. 8)

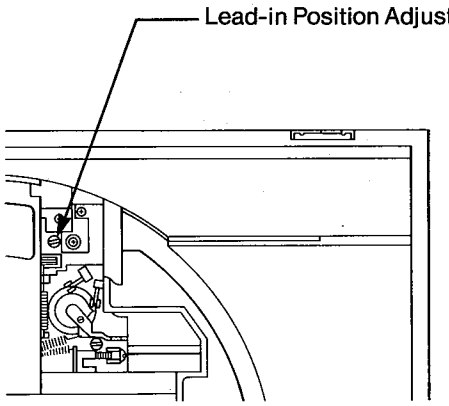


Fig. 8

End Return Sensitivity Adjustment

1. Turn on the power switch of the unit.
2. Connect the oscilloscope to TP . (Fig. 9)
3. Play a record and adjust VR01 (100 K-B), so that the peak value of the DC element becomes 2.6 ~ 2.8V. (Fig. 10)
4. Confirm that the END Return is smoothly exercised.

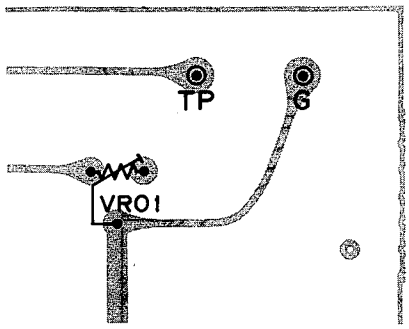


Fig. 9

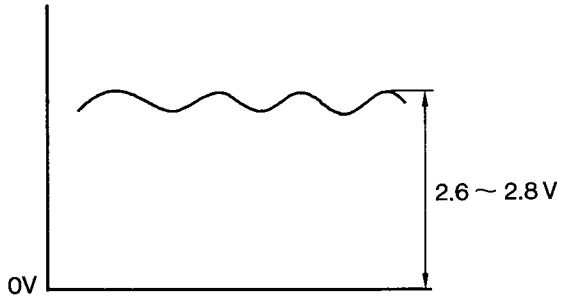
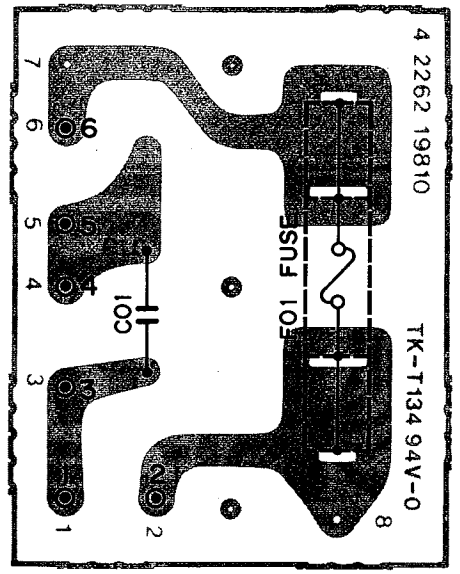
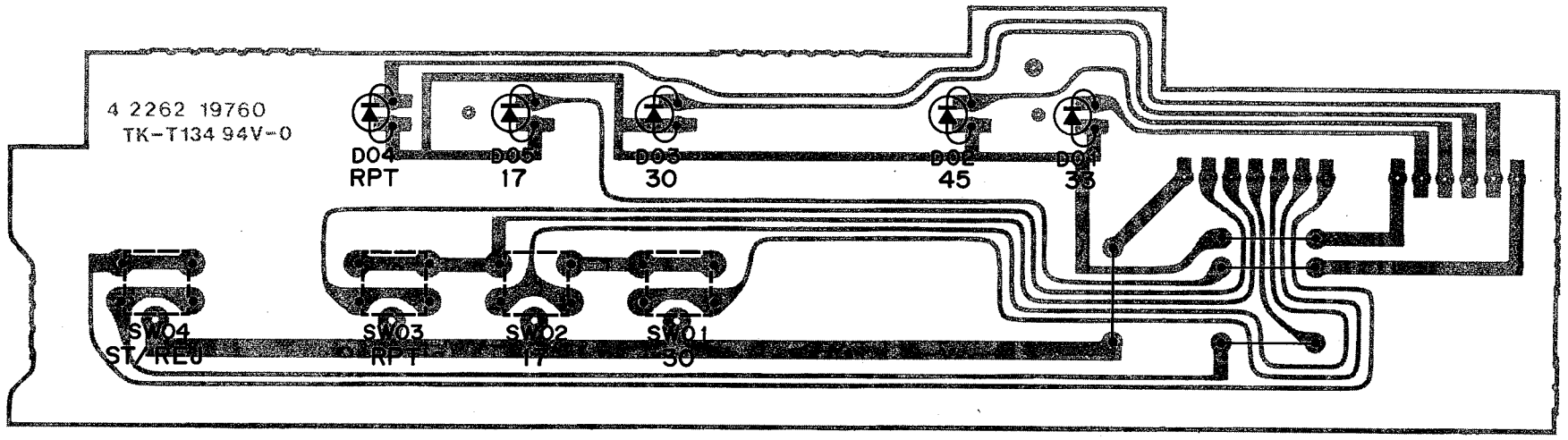


Fig. 10

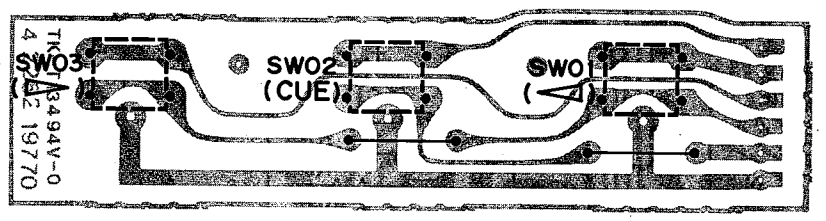
FUSE P.C.BOARD
(BOTTOM VIEW)



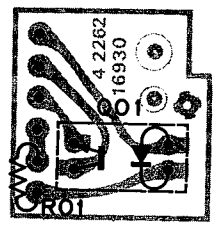
SWITCH LED P.C.BOARD
(BOTTOM VIEW)



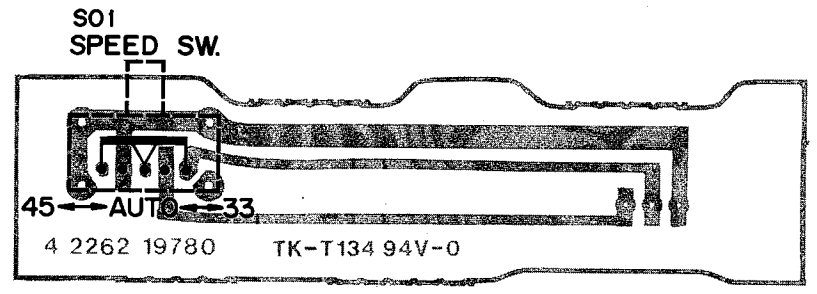
SWITCH P.C.BOARD
(BOTTOM VIEW)



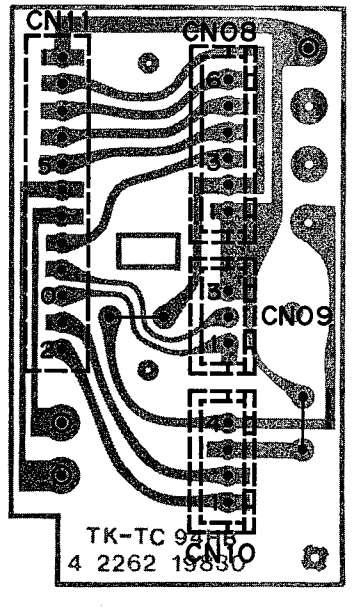
PCR P.C.BOARD
(BOTTOM VIEW)



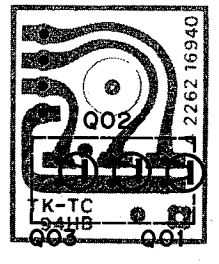
SPEED SWITCH P.C.BOARD
(BOTTOM VIEW)



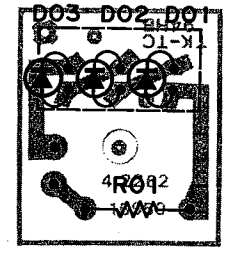
TERMINAL P.C.BOARD
(BOTTOM VIEW)



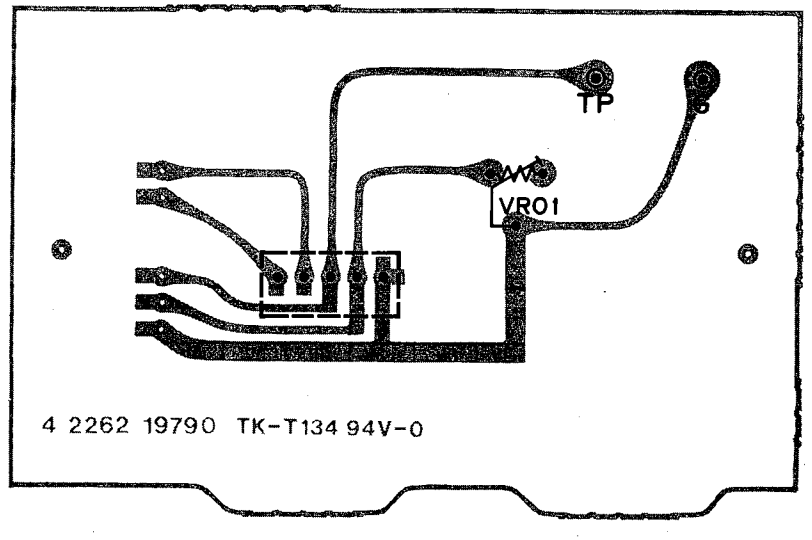
PTR P.C.BOARD
(BOTTOM VIEW)



LED P.C.BOARD
(BOTTOM VIEW)

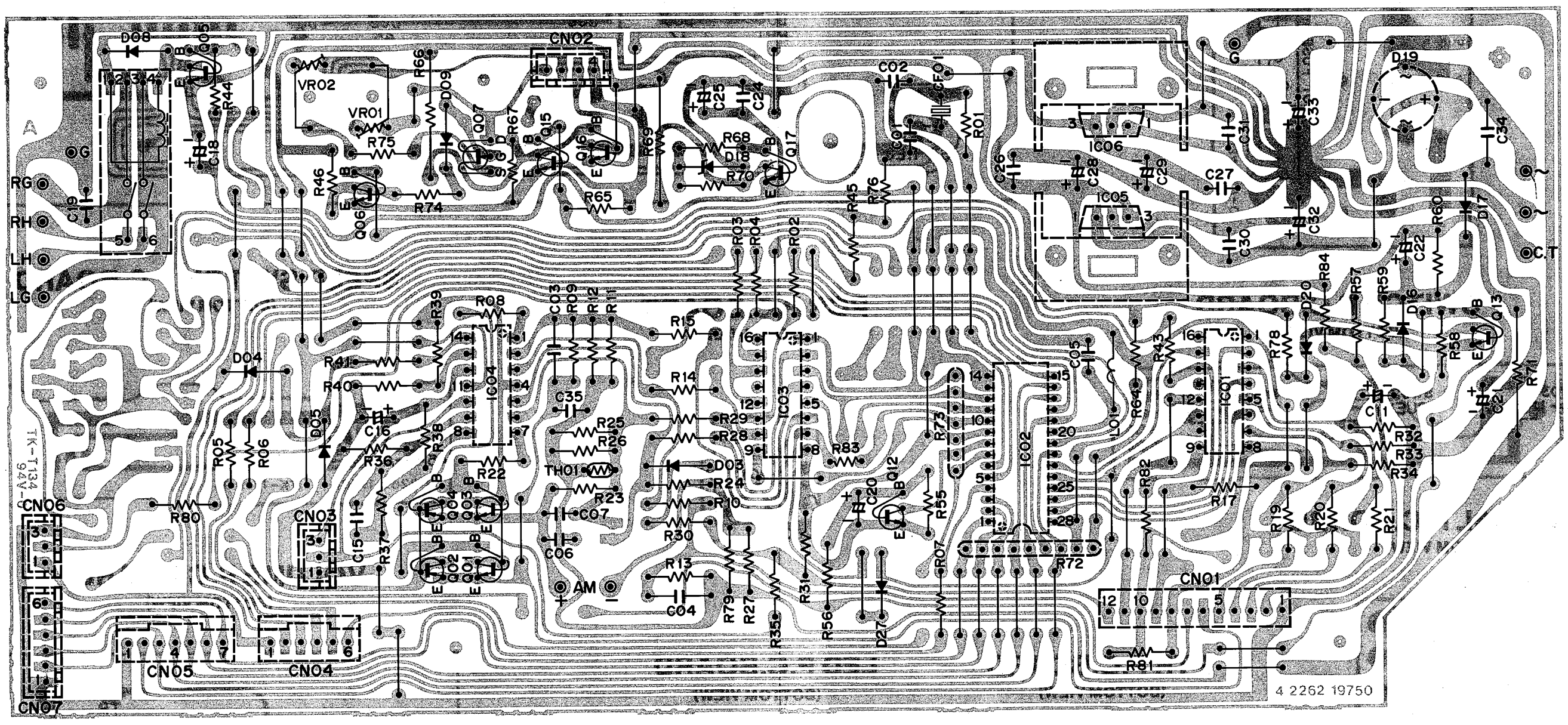


VOLUME P.C.BOARD
(BOTTOM VIEW)



CONTROL P.C.BOARD

(BOTTOM VIEW)



IC PIN NUMBERS DC VOLTAGES

SYMBOL No.	DEVICE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
IC01	MSM4049RS	5.3V	0V	4.7V	5.3V	0V	5.3V	0V	0V	0V	5.3V	5.3V	0V	–	3.7V	0V	–				
IC03	MSM4049RS	5.3V	0V	5.3V	0V	5.3V	0V	5.2V	0V	5.3V	0V	5.2V	0.6V	–	0.6V	5.2V	–				
IC04	LA6324	0.6V	0V	0V	12.4V	0V	0V	−0.9V	0V	0V	0V	−12.1V	0V	3.4V	−11.4V						
IC05	NJM7812	19.0V	0V	12.4V																	
IC06	NJM7912	0V	−20.0V	−12.1V																	
IC02	LM6416E	5.3V	5.3V	5.3V	4.0V	2.5V	2.1V	5.3V	5.3V	5.3V	5.3V	5.3V	5.3V	0V	0V	3.4V	5.0V	4.9V	4.9V	5.3V	5.2V
		21	22	23	24	25	26	27	28												
		−6.0V	5.2V	0V	5.3V	0V	5.3V	5.3V	3.8V												

TRANSISTOR DC VOLTAGES

SYMBOL No.	DEVICE	B	C	E	SYMBOL No.	DEVICE	B	C	E
Q01	2SD863	0.6V	12.4V	0V	Q13	2SC536	0.7V	0V	0V
Q02	2SB764	0.6V	−12.1V	0V	Q15	2SC536	0.7V	0.3V	0V
Q03	2SD863	−0.8V	12.4V	−0.2V	Q16	2SD863	0.3V	12.4V	0V
Q04	2SB764	−0.8V	−12.1V	−0.2V	Q17	2SD863	5.9V	9.6V	5.3V
Q05	2SC536	0.7V	0.7V	0V					
Q06	2SC536	0.7V	0V	0V			G	S	D
Q12	2SC536	0V	5.3V	0V	Q07	2SK304	−0.6V	0V	0V

P.C.BOARD PARTS LIST

Ref. No.	Part No.	Description				Q'ty
	CONTROL P.C.B. ASSY					
PCB1	141 0 1939 05390	Control P.C.B. Assy				1
	103 3 1903 00611	Screw, Brazier Hd. Tapping-2, +M3.0x6				2
	111 2 6220 11100	Wire Wrap Terminal				11
	131 2 6201 35500	Plate Heat Sink				2
	141 2 4729 05000	Staple 5				1
CN1	4 2369 71901	Connector 12P Top				1
CN2	4 2369 73140	Connector 4P				1
CN3	4 2369 73130	Connector 3P				1
CN4	4 2362 00370	6P Plag				1
CN5	4 2362 00400	Plug 7P				1
CN6	4 2369 73970	Plug 3P				1
CN7	4 2369 73160	Connector 6P				1
L1	4 2532 00540	Choke Coil 47μH				1
VR1	4 2222 01010	Semi-fixed (B-50kΩ)				1
VR2	4 2222 01040	Semi Fixed (B-20kΩ)				1
CF1	4 2252 00090	CSB400P				1
RE1	4 2329 70310	Reed Relay				1
IC1	4 2069 72530	IC, MSM 4049 RS				1
IC2	208 5 3806 41635	IC, LM6416E-352				1
IC3	4 2069 72530	IC, MSM 4049 RS				1
IC4	206 5 1296 32410	IC, LA 6324				1
IC5	4 2069 72560	IC, NJM 7812				1
IC6	4 2069 72570	IC, NJM 7912				1
Q1	203 5 7340 86350	Transistor, 2SD 863				1
Q2	203 5 7350 76450	Transistor, 2SB 764				1
Q3	203 5 7340 86350	Transistor, 2SD 863				1
Q4	203 5 7350 76450	Transistor, 2SB 764				1
Q5	203 5 5000 53670	Transistor, 2SC 536				1
Q6	203 5 5000 53650	Transistor, 2SC 536				1
Q7	203 5 4370 30460	FET, 2SK 304				1
Q12	203 5 5000 53650	Transistor, 2SC 536				1
Q13	203 5 5000 53650	Transistor, 2SC 536				1
Q15	203 5 5000 53670	Transistor, 2SC 536				1
Q16	203 5 7340 86350	Transistor, 2SD 863				1
Q17	203 5 7340 86350	Transistor, 2SD 863				1
D3	202 5 2810 44210	Diode, DS 442				1
D4	202 5 2810 44210	Diode, DS 442				1
D5	202 5 2810 44210	Diode, DS 442				1
D8	202 5 2810 44210	Diode, DS 442				1
D9	202 5 2810 44210	Diode, DS 442				1
D16	202 5 2810 44210	Diode, DS 442				1
D17	202 5 2470 13540	Diode, DS 135				1
D18	202 5 3210 05613	Zener Diode, GZA5.6Z				1
D19	DGG - W02- - - - -	Diode, W 02				1
D20	202 5 2810 44210	Diode, DS 442				1
D22	202 5 2810 44210	Diode, DS 442				1
TH1	204 5 9000 05000	Thermistor, SDT 500				1
C1	CP2 2 1101 J003V	Polypropylen	220pF	100V	±5%	1
C2	CP2 2 1101 J003V	Polypropylen	220pF	100V	±5%	1
C3	CC3 3 1250 KE00R	Ceramic	330pF	25V	±10%	1
C4	CI1 0 3250 NF00R	Boundary	0.01μF	25V	±30%	1
C5	CM1 0 4500 J00TV	Mylar	0.1μF	50V	±5%	1
C6	CM1 0 3500 K00SV	Mylar	0.01μF	50V	±10%	1
C7	CC3 3 1500 KD00C	Ceramic	330pF	50V	±10%	1
C11	CD2 2 5500 0001V	Electrolytic	2.2μF	50V		1
C15	CM1 0 3500 K00SV	Mylar	0.01μF	50V	±10%	1
C16	CD4 7 5250 0001V	Electrolytic	4.7μF	25V		1
C18	CD1 0 6160 0001V	Electrolytic	10μF	16V		1
C19	CC1 0 3500 ZG00C	Ceramic	0.01μF	50V	+80,-20%	1
C20	CD1 0 4500 0001V	Electrolytic	0.1μF	50V		1
C21	CD4 7 6250 0001V	Electrolytic	47μF	25V		1
C22	CD4 7 5500 0001V	Electrolytic	4.7μF	50V		1
C24	CM1 0 4500 J00TV	Mylar	0.1μF	50V	±5%	1

Ref. No.	Part No.	Description				Q'ty
C25	CD4 7 6100 0001V	Electrolytic	47μF	10V		1
C26	CM1 0 4500 J00TV	Mylar	0.1μF	50V	±5%	1
C27	CM1 0 4500 J00TV	Mylar	0.1μF	50V	±5%	1
C28	CD1 0 7160 0001V	Electrolytic	100μF	16V		1
C29	CD1 0 7160 0001V	Electrolytic	100μF	16V		1
C30	CC1 0 3500 ZG00C	Ceramic	0.01μF	50V	+80,-20%	1
C31	CC1 0 3500 ZG00C	Ceramic	0.01μF	50V	+80,-20%	1
C32	4 2239 71360	Electrolytic	1000μF	25V		1
C33	CD4 7 7250 0000V	Electrolytic	470μF	25V		1
C34	CC1 0 3501 YEY0C	Ceramic	0.01μF	500V	+100,-0%	1
C35	CM1 0 3500 K00SV	Mylar	0.01μF	50V	±10%	1
R1	RD1 0 5251 JM000	Carbon	1MΩ	1/4W	±5%	1
R2	RD1 0 3251 JM000	Carbon	10kΩ	1/4W	±5%	1
R3	RD3 3 1251 JM000	Carbon	330Ω	1/4W	±5%	1
R4	RD3 3 1251 JM000	Carbon	330Ω	1/4W	±5%	1
R5	RD3 3 1251 JM000	Carbon	330Ω	1/4W	±5%	1
R6	RD1 5 1251 JM000	Carbon	150Ω	1/4W	±5%	1
R7	RD3 3 1251 JM000	Carbon	330Ω	1/4W	±5%	1
R8	RD2 2 2251 JM000	Carbon	2.2kΩ	1/4W	±5%	1
R9	RD1 0 2251 JM000	Carbon	1kΩ	1/4W	±5%	1
R10	RD4 7 1251 JM000	Carbon	470Ω	1/4W	±5%	1
R11	RD4 7 1251 JM000	Carbon	470Ω	1/4W	±5%	1
R12	RD4 7 1251 JM000	Carbon	470Ω	1/4W	±5%	1
R13	RD3 9 A251 JS000	Carbon	3.9Ω	1/4W	±5%	1
R14	RD2 7 2251 JM000	Carbon	2.7kΩ	1/4W	±5%	1
R15	RD8 2 1251 JM000	Carbon	820Ω	1/4W	±5%	1
R17	RD1 0 3251 JM000	Carbon	10kΩ	1/4W	±5%	1
R19	RD1 0 3251 JM000	Carbon	10kΩ	1/4W	±5%	1
R20	RD1 0 3251 JM000	Carbon	10kΩ	1/4W	±5%	1
R21	RD1 0 3251 JM000	Carbon	10kΩ	1/4W	±5%	1
R22	RD2 2 2251 JM000	Carbon	2.2kΩ	1/4W	±5%	1
R23	RD1 0 2251 JM000	Carbon	1kΩ	1/4W	±5%	1
R24	RD4 7 1251 JM000	Carbon	470Ω	1/4W	±5%	1
R25	RD4 7 1251 JM000	Carbon	470Ω	1/4W	±5%	1
R26	RD4 7 1251 JM000	Carbon	470Ω	1/4W	±5%	1
R27	RD4 7 A251 JS000	Carbon	4.7Ω	1/4W	±5%	1
R28	RD3 9 2251 JM000	Carbon	3.9kΩ	1/4W	±5%	1
R29	RD1 2 2251 JM000	Carbon	1.2kΩ	1/4W	±5%	1
R30	RD3 3 2251 JM000	Carbon	3.3kΩ	1/4W	±5%	1
R31	RD3 3 2251 JM000	Carbon	3.3kΩ	1/4W	±5%	1
R32	RD1 0 4251 JM000	Carbon	100kΩ	1/4W	±5%	1
R33	RD1 0 4251 JM000	Carbon	100kΩ	1/4W	±5%	1
R34	RD1 0 4251 JM000	Carbon	100kΩ	1/4W	±5%	1
R35	RD4 7 3251 JM000	Carbon	47kΩ	1/4W	±5%	1
R36	RD2 7 3251 JM000	Carbon	27kΩ	1/4W	±5%	1
R37	RD1 2 4251 JM000	Carbon	120kΩ	1/4W	±5%	1
R38	RD4 7 3251 JM000	Carbon	47kΩ	1/4W	±5%	1
R39	RD2 2 3251 JM000	Carbon	22kΩ	1/4W	±5%	1
R40	RD8 2 2251 JM000	Carbon	8.2kΩ	1/4W	±5%	1
R41	RD1 0 3251 JM000	Carbon	10kΩ	1/4W	±5%	1
R43	RD1 0 3251 JM000	Carbon	10kΩ	1/4W	±5%	1
R44	RD1 0 3251 JM000	Carbon	10kΩ	1/4W	±5%	1
R45	RD2 2 3251 JM000	Carbon	22kΩ	1/4W	±5%	1
R46	RD1 0 3251 JM000	Carbon	10kΩ	1/4W	±5%	1
R55	RD1 0 3251 JM000	Carbon	10kΩ	1/4W	±5%	1
R56	RD4 7 3251 JM000	Carbon	47kΩ	1/4W	±5%	1
R57	RD1 0 3251 JM000	Carbon	10kΩ	1/4W	±5%	1
R58	RD1 0 3251 JM000	Carbon	10kΩ	1/4W	±5%	1
R59	RD6 8 3251 JM000	Carbon	68kΩ	1/4W	±5%	1
R60	RD6 8 2251 JM000	Carbon	6.8kΩ	1/4W	±5%	1
R64	RD2 2 3251 JM000	Carbon	22kΩ	1/4W	±5%	1
R65	RD2 2 3251 JM000	Carbon	22kΩ	1/4W	±5%	1
R66	RH4 7 1102 JZ000	Metal	470Ω	1W	±5%	1
R67	RD1 0 3251 JM000	Carbon	10kΩ	1/4W	±5%	1

P.C.BOARD PARTS LIST (Continued)

Ref. No.	Part No.	Description				Q'ty
R68	RD2 2 1251 JM000	Carbon	220Ω	1/4W	±5%	1
R69	RH3 9 0102 JZ000	Metal	39Ω	1W	±5%	1
R70	RD6 8 1251 JM000	Carbon	680Ω	1/4W	±5%	1
R71	RH4 7 1102 JZ000	Metal	470Ω	1W	±5%	1
R72	4 2219 70460	Resistor 10k x 8 J				1
R73	4 2219 70450	Resistor 10k x 6 J				1
R74	RD4 7 3251 JM000	Carbon	47kΩ	1/4W	±5%	1
R75	RD1 0 2251 JM000	Carbon	1kΩ	1/4W	±5%	1
R76	RD2 2 3251 JM000	Carbon	22kΩ	1/4W	±5%	1
R78	RD2 2 3251 JM000	Carbon	22kΩ	1/4W	±5%	1
R79	RD1 0 1251 JM000	Carbon	100Ω	1/4W	±5%	1
R80	RD1 0 2251 JM000	Carbon	1kΩ	1/4W	±5%	1
R81	RD1 0 3251 JM000	Carbon	10kΩ	1/4W	±5%	1
R82	RD1 0 3251 JM000	Carbon	10kΩ	1/4W	±5%	1
R83	RD1 0 3161 JH000	Carbon	10kΩ	1/6W	±5%	1
R84	RD1 0 0251 JS000	Carbon	10Ω	1/4W	±5%	1
	PCR P.C.B. ASSY					
PCB2	141 0 1939 02710	PCR P.C.B. Assy				1
CN10	4 2359 76742	Connector 4P Assy				1
Q1	4 2039 71430	Photo Interrupter				1
R1	RD5 6 1251 JN000	Carbon	560Ω	1/4W	±5%	1
	PTR P.C.B. ASSY					
PCB3	141 0 1939 02721	PTR P.C.B. Assy				1
	141 2 3529 38900	LED Spacer				1
CN8	4 2359 76606	Connector 6P Assy				1
Q1	4 2039 71500	Photo TR SPS-103-01				1
Q2	4 2039 71500	Photo TR SPS-103-01				1
Q3	4 2039 71500	Photo TR SPS-103-01				1
	LED P.C.B. ASSY					
PCB4	141 0 1939 02731	LED P.C.B. Assy				1
	141 2 3529 38900	LED Spacer				1
D1	4 2029 73160	Photo D. SLR-902A-01				1
D2	4 2029 73160	Photo D. SLR-902A-01				1
D3	4 2029 73160	Photo D. SLR-902A-01				1
R1	RD5 6 1251 JM000	Carbon	560Ω	1/4W	±5%	1
	TERMINAL P.C.B. ASSY					
PCB5	141 0 1939 05470	Terminal P.C.B. Assy				1
	111 2 6220 11100	Wire Wrap Terminal				3
	141 2 4729 05000	Staple 5				2
CN8	4 2369 73160	Connector 6P				1
CN9	4 2369 73130	Connector 3P				1
CN10	4 2369 73140	Connector 4P				1
CN11	4 2369 71901	Connector 12P Top				1
	SWITCH LED P.C.B. ASSY					
PCB6	141 0 1939 05400	Switch LED P.C.B. Assy				1
	141 2 3529 44500	Spacer				1
	131 0 4006 22293	Cord Assy				1
	131 0 4006 22291	Cord Assy				1
SW1	4 2312 05801	Key Board SW (30)				1
SW2	4 2312 05801	Key Board SW (17)				1
SW3	4 2312 05801	Key Board SW (Repeat)				1
SW4	4 2312 05801	Key Board SW (ST/REJ)				1
D1	DYY - SLR- 54VT-	LED, SLR 54 VT 3 (33rpm)				1
D2	DYY - SLR- 54VT-	LED, SLR 54 VT 3 (45rpm)				1

Ref. No.	Part No.	Description			Q'ty
D3	DYY - SLR- 54VT-	LED, SLR 54 VT 3 (30cm)			1
D4	DYY - SLR- 54PT-	LED, SLR 54 PT 3 (Repeat)			1
D5	DYY - SLR- 54VT-	LED, SLR 54 VT 3 (17cm)			1
	SWITCH P.C.B. ASSY				
PCB7	141 0 1939 05410	Switch P.C.B. Assy			1
CN7	4 2359 77620	Connnector 6P Assy			1
SW1	4 2312 05801	Key Board Switch (◁)			1
SW2	4 2312 05801	Key Board Switch (CUE)			1
SW3	4 2312 05801	Key Board Switch (▷)			1
	SPEED SWITCH P.C.B. ASSY				
PCB8	141 0 1939 05420	Speed Switch P.C.B. Assy			1
CN6	4 2359 77622	Connector 3P Assy			1
S1	4 2319 76670	Slide Switch (Speed)			1
	VOLUME P.C.B. ASSY				
PCB9	141 0 1939 05430	Volume P.C.B. Assy			1
	4 2362 00100	Plug 5P			1
	111 2 6220 11100	Wire Wrap Terminal			2
CN3	4 2359 77621	Connector 3P Assy			1
VR1	4 2222 02680	Semi Fixed (B-100kΩ)			1
	FUSE P.C.B. ASSY				
PCB10	141 0 1939 05450	Fuse P.C.B. Assy			1
	⚠ 4 2359 23000	Fuse Holder			2
	4 2372 00830	EC Terminal 1P			2
	111 2 6220 11100	Wire Wrap Terminal			4
	131 2 6114 01500	Cover Safety			1
F1	⚠ 4 2342 00130	Fuse (250mA)			1
C1 ⚠	CK2 2 3631 M000V	Mylar	0.022μF	630V	1

NOTES:

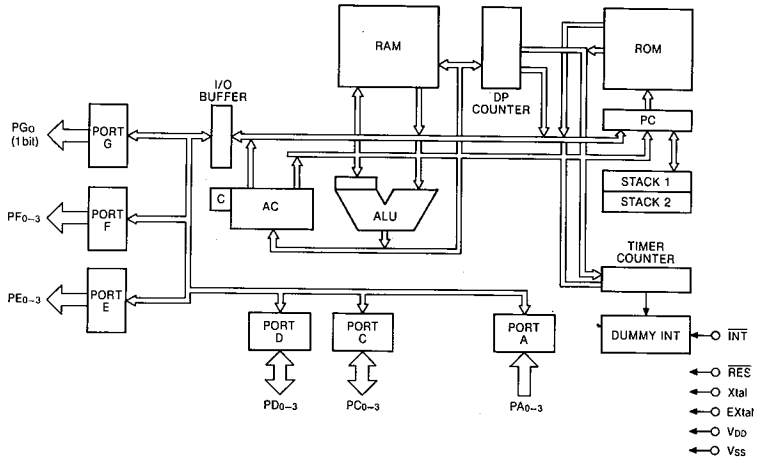
1. Parts order must contain Model Number, Part Number and Description.
2. Ordering quantity of screws and resistors must be multiple of 10 pcs.

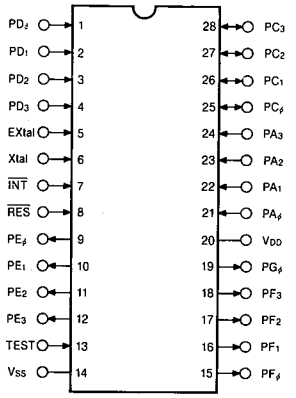
PRODUCT SAFETY NOTICE

Each precaution in this manual should be followed during servicing. Components identified with the IEC symbol ⚠ in the parts list and the schematic diagram designate components in which safety can be of special significance. When replacing a component identified with ⚠, use only the replacement parts designated, or parts with the same ratings of resistance, wattage or voltage that are designated in the parts list in this manual. Leakage-current or resistance measurements must be made to determine that exposed parts are acceptably insulated from the supply circuit before returning the product to the customer.

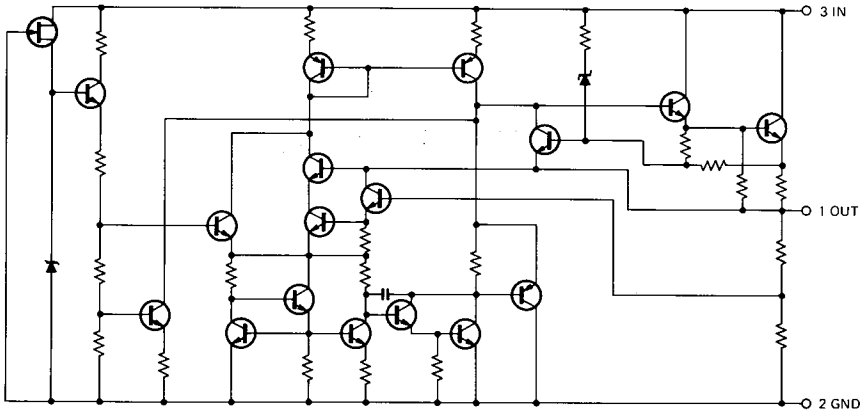
IC SIGNAL FLOW & EQUIVALENT CIRCUIT

CONTROL IC LM 6416 E

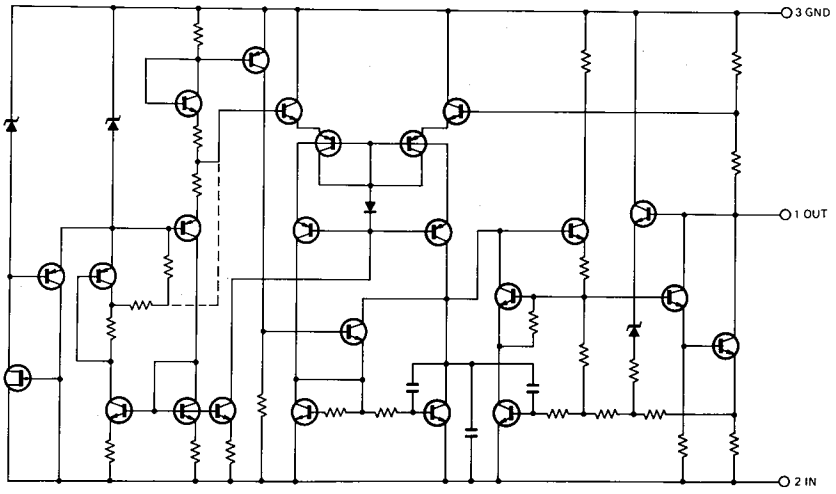




VOLTAGE REGULATOR IC NJM 7812

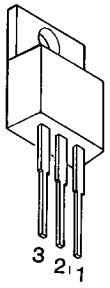


VOLTAGE REGULATOR IC NJM 7912

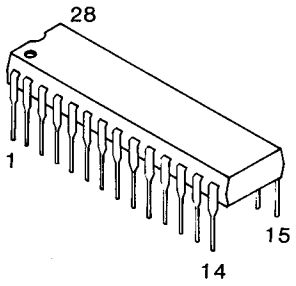


SEMICONDUCTOR LEAD IDENTIFICATION

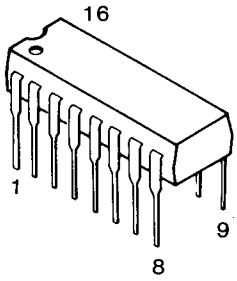
INTEGRATED CIRCUITS



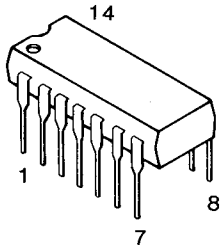
- NJM 7812
- NJM 7912



- LM 6416 E-352

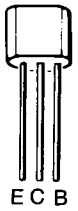


- MSM 4049 RS

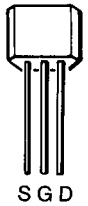


- LA 6324

BI-POLAR TRANSISTORS



- 2SC 536



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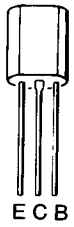
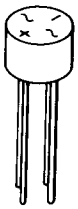
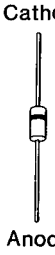


- 2SB 764
- 2SD 863

DIODES

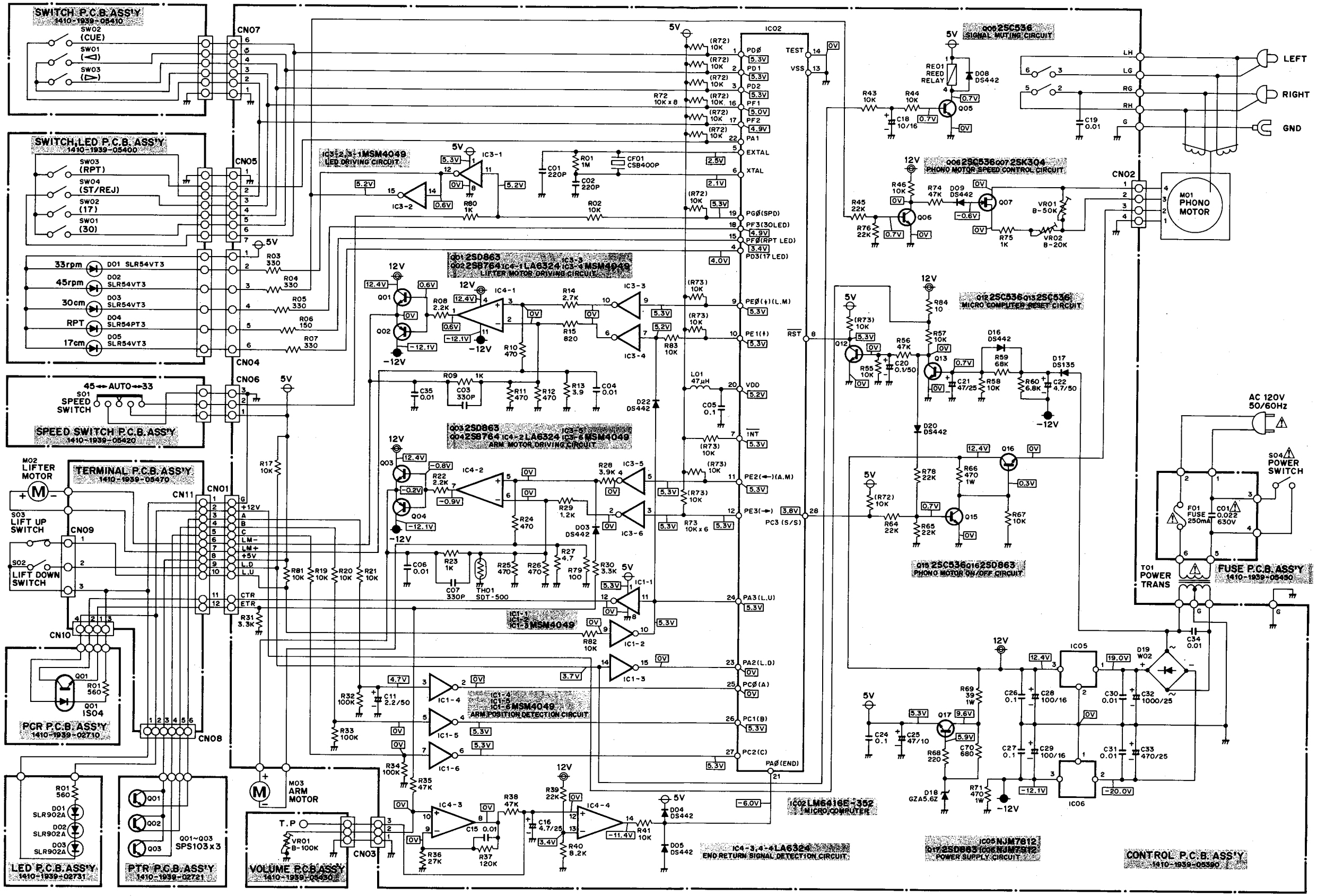


- W 02



- DS 442
- GZA 5.6 Z

SCHEMATIC DIAGRAM



No.	Name	Position	No.	Name	Position	No.	Name	Position
S1	SPEED Switch	AUTO		**SWITCH P.C.B. Assy**			**SWITCH LED P.C.B. Assy**	
S2	LIFT DOWN Switch	OFF	SW1	(◁) Switch	OFF	SW1	(30) Switch	OFF
S3	LIFT UP Switch	ON	SW2	CUE Switch	OFF	SW2	(17) Switch	OFF
S4	POWER Switch	OFF	SW3	(▷) Switch	OFF	SW3	REPEAT Switch	OFF
						SW4	START / REJECT Switch	OFF

PRODUCT SAFETY NOTICE

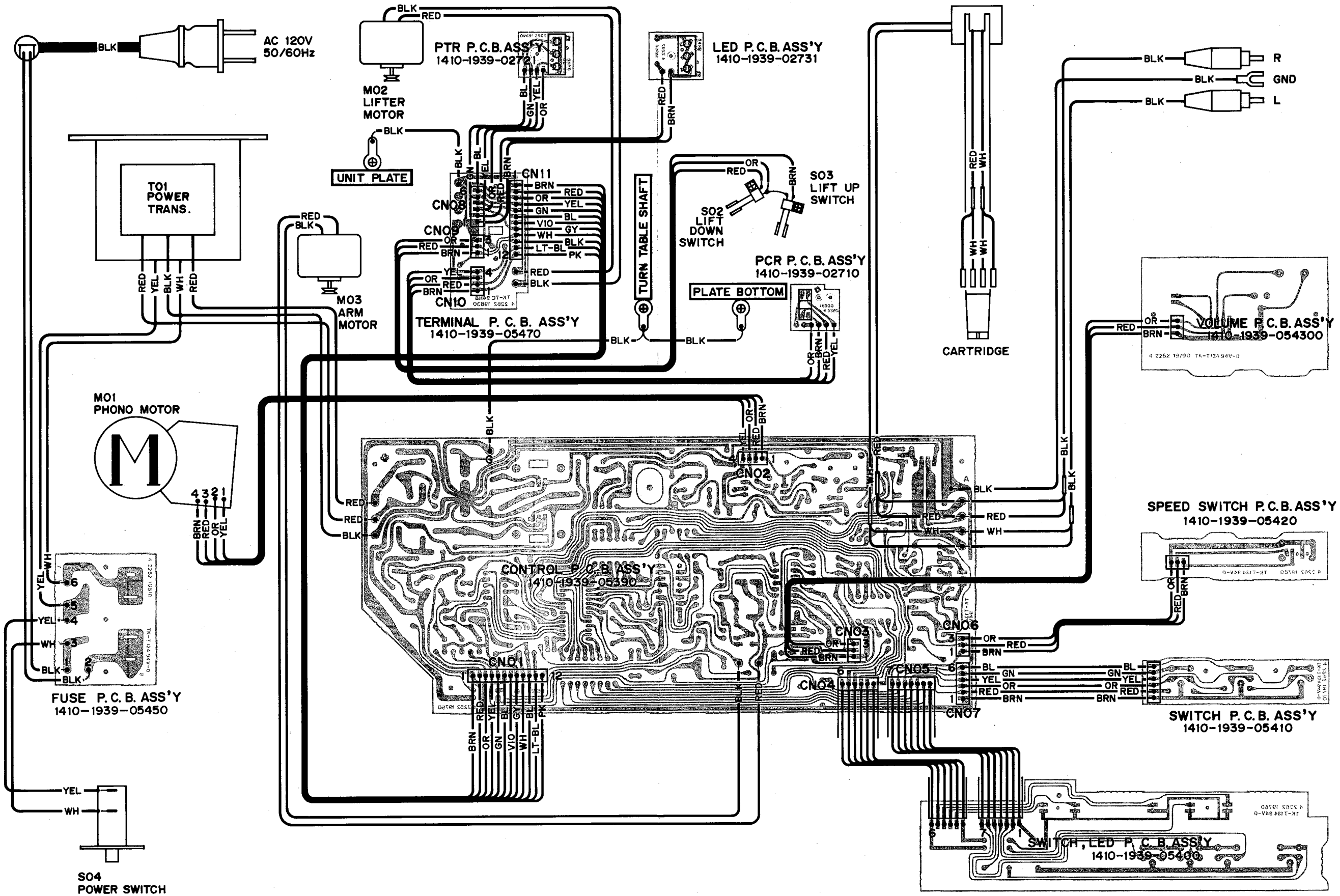
Each precaution in this manual should be followed during servicing. Components identified with the IEC symbol ⚠ in the parts list and the schematic diagram designate components in which safety can be of special significance. When replacing a component identified with ⚠, use only the replacement parts designated, or parts with the same ratings of resistance, wattage or voltage that are designated in the parts list in this manual.
Leakage-current or resistance measurements must be made to determine that exposed parts are acceptably insulated from the supply circuit before returning the product to the customer.

NOTES:

1. All resistors values are indicated in "ohm" ($K=10^3$, $M=10^6$).
2. All capacitors values are indicated in "μF" ($P=10^{-12}$).
3. All voltages indicated on the schematics are measured under the following conditions.
   a. Use a V.T.V.M.
   b. All voltages ±10 % with respect to chassis ground
   c. No signals at input terminals
   d. AC input at 120 volts 60 Hz.
4. This is a basic schematic diagram.

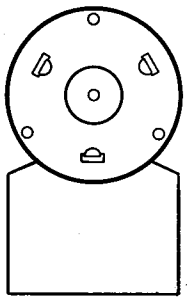
Because Fisher products are subject to continuous improvement, Fisher Corporation reserves the right to make any changes or modifications without notice.

POINT TO POINT WIRING DIAGRAM

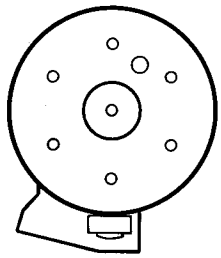


CAUTION OF USAGE FOR MOTOR

As the motors mounted on the MT-730 are used manufactured FUJIYA and MATSUSHITA, the resistance varies with each motor as follows:



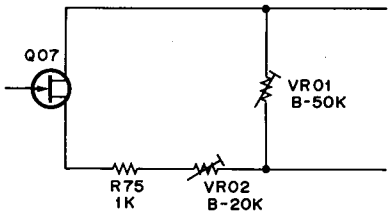
FUJIYA MOTOR

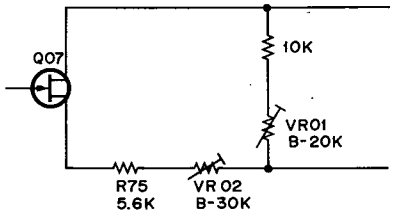


MATSUSHITA MOTOR

→1340 5011 02803	Motor Assy	
4 5272 00130	Motor	
1342 6401 00130	Pulley	

4 5272 00080	Motor
1342 6401 14500	Pulley



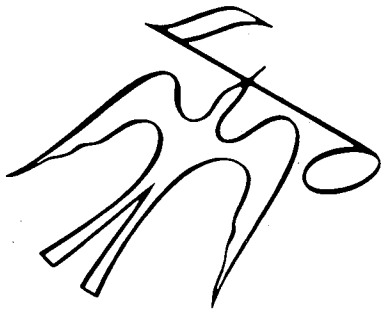


Ref. No.	FUJIYA MOTOR	MATSUSHITA MOTOR
R75	Carbon 1kΩ 1/4W	Carbon 5.6kΩ 1/4W
VR01	Semi Fixed (B-50kΩ)	Semi Fixed (B-20kΩ)
VR02	Semi Fixed (B-20kΩ)	Semi Fixed (B-30kΩ)
	Not Used	Carbon 10kΩ 1/6W

CAUTION OF USAGE FOR IC03

As the IC03 mounted on the MT-730 are used both MSM4049RS (4 2069 72530) and TC4049BP (ITT-TC4049BP), the resistance varies with each IC as follows:

Ref. No.	MSM4049RS (4 2069 72530)	TC4049BP (ITT-TC4049BP)
R14	Carbon 2.7kΩ 1/4W	Carbon 3.3kΩ 1/4W
R15	Carbon 820Ω 1/4W	Carbon 560Ω 1/4W
R27	Carbon 4.7Ω 1/4W	Carbon 3.9Ω 1/4W
R29	Carbon 1.2kΩ 1/4W	Carbon 820Ω 1/4W
R30	Carbon 3.3kΩ 1/4W	Carbon 5.6kΩ 1/4W
R79	Carbon 100Ω 1/4W	Not Used



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